ABSTRACT OF THE DISCLOSURE

A microwave device for de-icing and keeping areas of hollow body structures free from ice keeps atmospherically exposed leading edges and adjacent areas free of ice by means of a coolant circuit. The surface segments between the adjacent areas are kept free from ice as a result of the effects of a microwave device on the wall of the surface segments and the heating that occurs by the exposure to microwave radiation. A series of consecutive microwave-tight chambers is disposed behind the wall of the exposed area. A microwave source supplies microwaves to the chambers with the aid of a decoupling structure disposed therein, resulting in high/multimode excitation. The waste heat of the microwave sources is collected by means of a coolant circuit and transported to the r areas adjacent the leading edge for permanent heating in order to keep the surfaces free from ice. The microwave sources are cyclically operated.